

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-7 are presently pending in this case. Claims 1-3 are amended and new Claims 4-7 are added by the present amendment. As amended Claims 1-3 and new Claims 4-7 are supported by the original disclosure,<sup>1</sup> no new matter is added.

In the outstanding Official Action, Claims 1 and 3 were rejected under 35 U.S.C. §102(b) as anticipated by Shirashi et al. (European Patent Application Publication No. 1 115 237, hereinafter “Shirashi”). However, Claim 2 was objected to as dependent on a rejected base claim, but otherwise were indicated as including allowable subject matter if re-written in independent form.

Applicants gratefully acknowledge the indication that Claim 2 includes allowable subject matter.

The abstract is amended herewith to place it in conformance with U.S. practice. No new matter is added.

The outstanding rejection is respectfully traversed.

Amended Claim 1 recites in part:

a carrier/noise (C/N)-value-calculating circuit configured to measure an average value of amplitude *in a radial direction of signal points* of phase mapping of the baseband signal obtained by the detecting circuit to calculate a carrier/noise ratio for the received signal;  
a phase-noise-amount-calculating circuit configured to measure an average value of amplitude *in a circumferential direction of signal points* of the phase mapping of the baseband signal to calculate an amount of phase noise of the received signal.

Shirashi describes a radio digital signal receiver including CNR measuring circuit 5 and phase error detection circuit 6.<sup>2</sup> The outstanding Office Action cited CNR measuring

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<sup>1</sup>See, e.g., the specification at paragraph 49 of the published application.

circuit 5 of Shirashi as “a carrier/noise (C/N)-value-calculating circuit” and phase error detection circuit 6 of Shirashi as “a phase-noise-amount-calculating circuit.”<sup>3</sup> However, it is respectfully submitted that paragraph 27 of Shirashi simply describes that CNR measuring circuit 5 measures CNR based on the distribution of vector by the inputted baseband signals Id and Qd. Shirashi does not describe that this calculation is done by measuring an average value of amplitude *in a radial direction of signal points*. Thus, it is respectfully submitted that Shirashi does not teach “a carrier/noise (C/N)-value-calculating circuit” as defined in amended Claim 1.

Further, paragraph 27 of Shirashi simply describes that phase error detection circuit 6 looks up a phase difference between a receiving point comprising the inputted baseband signals Id and Qd and the point where the received signals are to be converged. Shirashi does not describe any calculation including measuring an average value of amplitude *in a circumferential direction of signal points*. Thus, it is respectfully submitted that Shirashi does not teach “a phase-noise-amount-calculating circuit” as defined in amended Claim 1 either.

Consequently, as Shirashi does not teach each and every element of Claim 1, Claim 1 (and Claims 2 and 4-7 dependent therefrom) is not anticipated by Shirashi and is patentable thereover.

Amended Claim 3 recites in part:

*measuring an average value of amplitude in a radial direction of signal points* of phase mapping of the baseband signal obtained in the orthogonally detecting to calculate a carrier/noise ratio for the received signal;

*measuring an average value of amplitude in a circumferential direction of signal points* of the phase mapping of the baseband signal to calculate an amount of phase noise of the received signal;

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<sup>2</sup>See Shirashi, Figure 1 and paragraph 26.

<sup>3</sup>See the outstanding Office Action at page 2, lines 12 and 13.

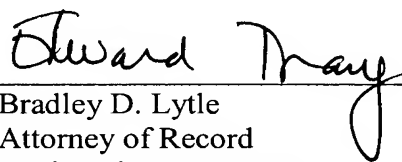
As noted above, Shirashi does not describe measuring an average value of amplitude in a *radial direction of signal points* or an average value of amplitude in a *circumferential direction of signal points*. Thus, it is respectfully submitted that Shirashi does not teach “measuring an average value of amplitude in a radial direction of signal points” or “measuring an average value of amplitude in a radial direction of signal points” as defined in amended Claim 3. Consequently, Claim 3 is also not anticipated by Shirashi and is patentable thereover.

New Claims 4-7 are supported at least by the specification at paragraph 49 of the published application. New Claims 4-7 are dependent on Claim 1, and thus are believed to be patentable for at least the reasons described above with respect to Claim 1. In addition, Claims 4-7 recite subject matter that further patentably defines over Shirashi. Consequently, Claims 4-7 are also patentable over Shirashi.

Accordingly, the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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